

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007328**Date Inspected:** 01-Jun-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei / Sun Bo**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** TOWER**Summary of Items Observed:**

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

Outside Yard at Vertical Mill:

The QA Inspector randomly observed that ZPMC milling was idle and no milling work was being performed on Lift 1 South Tower Shaft or Lift 2 South Tower.

The QA Inspector randomly observed 1 welder utilizing the Carbon Air Arc Gouging (CAAG) Process to remove the weld overlay in the cope areas at the ends of the longitudinal stiffeners to Skin D on Lift 1 South Tower Shaft below the 9M Diaphragm.

The QA Inspector randomly observed 3 ZPMC helpers utilizing angle grinders to clean up the bevel faces after CAAG operations on the ends of the longitudinal stiffeners and Skin Plates B, C and E on Lift 1 South Tower Shaft.

The QA Inspector randomly observed 1 ZPMC helper utilizing a pencil grinder to shape cope areas at the ends of the longitudinal stiffeners to Skin D on Lift 1 South Tower Shaft below the 9M Diaphragm.

The QA Inspector randomly observed 1 ZPMC helper utilizing an angle grinder to blend pickups on the exterior of

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Lift 2 South Tower Shaft.

The QA Inspector randomly observed 2 ZPMC helpers utilizing angle grinders to blend pickups on the longitudinal stiffeners of Lift 2 South Tower Shaft below the 51M Diaphragm.

The QA Inspector randomly observed 2 ZPMC helpers utilizing angle grinders to blend the fillet welds attaching the longitudinal stiffeners to 65M Lower Diaphragm of Lift 2 South Tower Shaft.

The QA Inspector randomly observed ABF Quality Control (QC) personnel marking up areas for re-work from the 65M Upper Diaphragm to above the 80.75M Diaphragm in Lift 2 South Tower Shaft.

The QA Inspector randomly observed ZPMC welder Fan Chun Lei 040491, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2F (Horizontal Fillet) Position with ZPMC Weld Procedure Specification (WPS) WPS-345-SMAW-2G (2F)-Repair and WPS-345-SMAW-3G (3F)-Repair in the 3F (Vertical Fillet), to weld repairs to copes Lift 2 South Tower 56M Upper Diaphragm to Skin Plate B welds. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Zhu Cheng Dong ID 040582, utilizing the SMAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-345-SMAW-2G (2F)-Repair to add more overlay to the bevel face on Lift 1 South Tower Skin Plate E. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Chen Xiao Ya ID 209076, utilizing the SMAW Process in the 4F (Overhead Fillet) Position with ZPMC WPS WPS-345-SMAW-4G (4F)-Repair to add more overlay to the bevel face on Lift 1 South Tower Skin Plate A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector performed a 100 % Visual Testing (VT) Inspection and 15% Magnetic Particle Testing (MT) Verification of the welds attaching the padeyes to Skin Plates C, D and E on Lift 2 South Tower Shaft per ZPMC NDT Notification Sheet 003293. The QA Inspector visually observed 3 areas which required blending and one area of undersized weld. ZPMC blended the affected areas and added weld metal to the undersized weld. There appeared to be no indications after the re-work by ZPMC and the QA Inspector accepted the above listed welds. The attached photograph provides additional detail.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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Summary of Conversations:

No relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod 13482570045, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie	Quality Assurance Inspector
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Reviewed By:	Clifford,William	QA Reviewer
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